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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/773,368	02/05/2004	Naoki Yamaguchi	FUJH 20.915	9533
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EXAMINER

MALKOWSKI, KENNETH J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/773,368	Applicant(s) YAMAGUCHI ET AL.	
	Examiner Kenneth J. Malkowski	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 recites the limitation "the V3 byte" in line 4 of claim 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 4 and 9 recite the limitation "the time slot interchange" in lines 5-6 of claims 4 and 9 respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the H4 byte" in line 3 of claim 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the V4 byte" in line 4 of claim 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the H3 byte" in line 4 of claim 8. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,527,393 to Shioda et al.

With respect to claim 1, Shioda discloses a bidirectional line switched ring network (title: BLSR network)) comprising: a plurality of optical transmission equipment sets connected in a ring form (Figure 1, node A – node D), wherein optical transmission equipment provided in a node on the transmission side performs transmission to each lower-order channel (Figure 3, lower ordered channels are entered into node 12) by attaching a transmission-side node ID (transmission side node ID is attached by ID write component 31 onto lower order channel at transmitting node 12)(column 2 lines 5-10 (ID writing means writes in the path overhead bytes of frames the IDs pre-assigned to add side nodes)), and, optical transmission equipment provided in a node (nodes A-D, figure 1) on the reception side collates the received transmission-side node ID with an expected value of the transmission-side node ID (column 2 lines 12-20 (comparing means for comparing the IDs of add side nodes read from the receive path with expected values)) having been set in advance (column 2 lines 5-10 (IDs are pre-assigned to add side nodes)), and when the collation does not match, the optical transmission equipment in the node on the reception side prevents a misconnection in the event of a failure by inserting an alarm indication signal (column 2 lines 15-21 (when the result of the comparison does not match an alarm indication signal is generated)).

With respect to claim 7, Shioda discloses a bidirectional line switched ring network (title: BLSR network)) comprising: a plurality of optical transmission equipment sets connected in a ring form (Figure 1, node A – node D), wherein optical transmission equipment provided in a node on the transmission side performs transmission to each higher-order channel (Figure 7, nodes include both low order group interfaces and higher order group interfaces) by attaching a transmission-side node ID (transmission side node ID is attached by ID write component

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31)(column 2 lines 5-10 (ID writing means writes in the path overhead bytes of frames the IDs pre-assigned to add side nodes)), and, optical transmission equipment provided in a node (nodes A-D, figure 1) on the reception side collates the received transmission-side node ID with an expected value of the transmission-side node ID (column 2 lines 12-20 (comparing means for comparing the IDs of add side nodes read from the receive path with expected values)) having been set in advance (column 2 lines 5-10 (IDs are pre-assigned to add side nodes)), and when the collation does not match, the optical transmission equipment in the node on the reception side prevents a misconnection in the event of a failure by inserting an alarm indication signal (column 2 lines 15-21 (when the result of the comparison does not match an alarm indication signal is generated)).

5. Claim 10 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Publication No. 2001/0046207 to Isonuma et al.

With respect to claim 10, Isonuma discloses a bidirectional line switched ring network (title: BLSR network))(page 2 paragraph 16 (BLSR)) comprising: two bidirectional line switched ring networks each comprising a plurality of optical transmission equipment sets connected in a ring form (Figure 29 including BLSR ring 1 and BLSR ring 2 both with bidirectional East and West directions), being interconnected with lower-order channels including a work channel (Figure 29 via primary node) and a protection channel (Figure 29 via secondary nodes), wherein, in regard to two nodes provided in each of the two bidirectional line switched ring networks, one node being connected to the lower-order work channel (Figure 29 primary nodes in between multiple rings provide work channels) while the other node being connected to the lower-order protection channel (Figure 29 secondary nodes in between multiple rings provide protection

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channels), as an expected source node ID to be transmitted from a source node to the lower-order work channel, either an ID of a source node transmitting to the own node, or an ID of a source node transmitting to the node connected to the lower-order protection channel, is set (page 3 paragraph 24 (nodes are assigned node IDs 1,2,3 in ascending order in the West direction starting from)).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,527,393 to Shioda et al. in view of U.S. Patent Application Publication No. 2002/0186719 to Spires et al.

With respect to claims 2 and 8, Shioda discloses the bidirectional line switched ring network according to claim 1, however, fails to specifically disclose wherein the transmission-side node ID is transmitted using the V3 byte. Despite this, transmitting ID information using a V3 byte is well known in the art. Spires, from the same field of endeavor discloses a TU multiframe overhead (page 1 paragraph 7) used in a SONET network (page 1 paragraph 2) wherein the payload adjustment can be accomplished using either the V1-V3 or H1-H3 bytes (page 1 paragraph 3) including payload adjustment opportunity (page 1 paragraph 7). The payload adjustments allow for eight bits of any data to be added to a SONET message frame

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using the V3 byte which allows for reframing and resynchronization at a network node such that any data may be added or removed at each network element (including identification data)(page 4 paragraph 40). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to implement the data adding/removal from the V3 byte as taught by Spires to transport the node ID information as taught by Shioda within the system as taught by Shioda.

The motivation for doing so would have been to maintain synchronization between network elements when using a system such as SONET with multiple fast and slow data rates. Using bytes V1-V4 also reduces interface complexity and is designed for maximum efficiency of the network elements (page 1 paragraph 3). Usage of the TU multiframe which contains bytes V1-V4 also allows for flexible and dynamic alignment of VCs within the TU multiframe (page 1 paragraph 7)(page 3 paragraph 23).

With respect to claim 3, Shioda in view of Spires discloses the bidirectional line switched ring network according to claim 2 (title: BLSR network)), however, Shioda fails to disclose Shioda in view of Spires fail to disclose a feature wherein various functions of the system can be set ineffective. Despite this, the limitation of turning a feature on or off is very well known in the art and is not considered a patentably distinct limitation. Examiner takes official notice that it would have been obvious to one of ordinary skill in the art to implement a switch, sensor, threshold, command, program or other well known in feature that would enable the system as taught by Shioda in view of Spires to be turned on or off.

With respect to claims 4-5 and 9, Shioda in view of Spires discloses the bidirectional line switched ring network according to claim 2 (Shioda: title: BLSR network))(Shioda: Figure 2), wherein, using the V3 bytes for three frames (Spires: page 1 paragraph 3 (bytes V1, V2, V3 can

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be used for payload adjustment (furthermore, spires notes Vx bytes can be used in an equivalent manner as Hx bytes))), the transmission-side node ID and a channel ID are additionally transmitted to each VT channel (Spires: page 1 paragraph 2 (payload can be sub-divided into smaller components known as virtual tributaries (VT) for the purpose of switching payloads)) so that the time slot interchange (TSI) of the VT channel is enabled in a pass-through node (Shioda: column 9 lines 1-14 (mapping data shows the current states of the time slot assignments to indicate either pas through or add or drop modes))).

With respect to claim 6, Shioda in view of Spires discloses the bidirectional line switched ring network according to claim 2, wherein the transmission-side node ID is transmitted using the V4 byte, in place of the V3 byte (Spires: page 1 paragraph 7 (bytes V1-V4 can float relative to one another and do not have fixed unchangeable positions))).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to BLSR networks in general:

U.S. Patent No. 5,442,620 is cited to show a BLSR network

U.S. Patent No. 6,452,931 is cited to show a BLSR multi-ring network

U.S. Patent No. 5,455,832 is cited to show usage of V3 bytes in a SONET network

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth J. Malkowski whose telephone number is (571) 272-5505. The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KJM 12/10/06


KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER